

## AMENDMENTS TO CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

### **Listing of Claims:**

1. (Currently Amended) A voltage detector, comprising:

a resistor pair connected to an input voltage;

a reference resistor connected to one resistor of the resistor pair, for partitioning the input voltage to produce a first comparison voltage;

at least one transistor pair respectively connected to the other resistor of the resistor pair and the reference resistor, for producing a second comparison voltage; and

a comparator connected between a connection of the two pairs and a connection of the resistor pair and the reference resistor, for receiving and then comparing the first comparison voltage and the second comparison voltage, thereby outputting a voltage level,

wherein the comparator has a detection voltage level, and the at least one transistor pair has a cascoded number varying with the detection voltage level such that a total number of cascoded transistor pairs is based on the cascoded number.

2. (Original) The voltage detector as claimed in claim 1, wherein a resistance ratio of the resistor pair, a resistance of the reference resistor and an area ratio of the at least one transistor pair are adjusted to reduce temperature coefficient impact.

3. (Original) The voltage detector as claimed in claim 2, wherein the comparator has a detection voltage level as  $V_{BG} = \frac{V_{in}}{R_2 + R_3}$ , where  $V_{BG}$  is the second comparison voltage,  $R_2$  is a resistance of the one of the resistor pair and  $R_3$  is the reference resistor.

Serial Number 10/799,708

4. (Currently Amended) The voltage detector as claimed in claim 3, wherein the resistance ratio of the resistor pair, the resistance of the reference resistor and the area ratio of the at least one transistor pair are adjusted such that the second comparison voltage has a voltage level in that is within a range of the detection voltage level, thereby obtaining a required detection voltage level.

5. (Canceled)

6. (Currently Amended) The voltage detector as claimed in claim ~~5~~ 1, wherein the total number of ~~cascoded~~ ~~cascaded~~ transistor pairs is two when the detection voltage ~~has level is~~ is twice ~~level~~ as high as the second comparison voltage.

7. (Currently Amended) The voltage detector as claimed in claim 1, further comprising: a power disconnection switch coupled between the resistor pair and the input voltage, for disconnecting a current flow in the resistor pair and thus entering a standby mode.